

PAYING FOR COLLEGE COSTS: DOES THE STUDENT'S SEX MAKE A DIFFERENCE?

By Jerry S. Davis

In recent years a great deal of attention has been given to the ways in which various groups of students can, should, or do meet the rising costs of postsecondary education. For example, reports on students attending public versus private colleges,¹ students who are members of racial-ethnic minority groups,² and students who attend college on a part-time basis have all received attention in the education media.³ Studies have focused attention on the differences in patterns of costs and paying for those costs among these and other groups of students. However, no recent study has examined the differences in patterns of costs and paying for them among students of different genders.⁴

Perhaps one reason for the limited research on this subject is that policies concerning pricing and paying for education are not based upon the sex of students who enroll in various institutions. Furthermore, financial aid programs which help students and families to pay for educational costs are, in the majority, forbidden by law to distribute awards on the basis of the recipients' sex.⁵

Although the formal policymaking process typically does not consider student gender as a decision-making factor, it is important to know if there are sex-related differences in the costs of postsecondary education and the ability to pay for it. As financial aid programs are designed to enhance student access to, choice of, and retention in postsecondary education, it is important to know if significant differences in the financial resources of men and women exist so that the programs may compensate for them.



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If men and women pay different amounts for education and/or have access to different amounts of financial aid or types of aid, it would behoove policymakers to consider factors which may account for these differences. While it is assumed that costs to men and women are similar and while "student expense budgets" that are used to calculate financial need are not distinguished by student gender, there may be significant differences in true student costs. Even though formal policy prohibits sexual discrimination in the distribution of aid awards among students, the practices followed by financial aids programs may result in discrimination in favor of men or of women.

The primary purpose of this paper is to answer the following questions:

- (1) Are there sex-related differences in the total resources available to students to pay for college costs?
- (2) Are there sex-related differences in the amounts and percentages of resources available to students from different sources? E.g., parents, student earnings, financial aid programs.
- (3) Are there sex-related differences in the way financial aid is distributed among students?

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- ¹ E.g., Carnegie Commission on Higher Education, *Higher Education: Who Pays? Who Benefits? Who Should Pay?*, (New York: McGraw-Hill, 1973); College Entrance Examination Board, *Report of the Committee on Student Economics*, (New York: College Entrance Examination Board, 1972); and, National Commission on the Financing of Postsecondary Education, *Financing Postsecondary Education in the United States*, (Washington: U.S. Government Printing Office, 1973).
 - ² Panel on Financing Low-Income and Minority Students in Higher Education, *Toward Equal Opportunity for Higher Education*, (New York: College Entrance Examination Board, 1973).
 - ³ Committee on the Financing of Higher Education for Adult Students, *Financing Part-Time Students: The New Majority in Postsecondary Education*, (Washington: American Council on Education, 1974).
 - ⁴ A recent publication, Froomkin, J. S., *Trends in the Sources of Student Support for Postsecondary Education*, (Iowa City, Ia.: The American College Testing Program, 1976,) described the earnings of students by their sex but gave no attention to other sources of financial support. An earlier report, Haven, E. W. and Horch, D. H., *How College Students Finance Their Education*, (Princeton, N. J.: College Scholarship Service of the College Entrance Examination Board, 1972), focused attention on sex-related differences in patterns of student finance. That study was based on data collected only for sophomores in 1969-70 and no attempt was made to ensure that men and women were attending institutions with the same basic student costs within various types of institutions.
 - ⁵ Title IX, Section 901 (a), *Public Law 92-318*, Higher Education Amendments Act of 1972.

The Data Base

The data were derived from statewide Student Resource Survey (SRS) studies of educational costs and resources of full-time undergraduates in three states. They were: New Jersey, for the 1974-75 academic year; and, California and Pennsylvania for the 1975-76 academic year.⁶

The SRS is a College Entrance Examination Board student survey instrument which contains 64 items which collect data about the personal, financial, and academic characteristics of the respondents. It is an anonymous, self-administered questionnaire which, in these three studies, was mailed to random, representative samples of students at the different types of institutions in the states. The SRS features a data analysis program which cross-tabulates many responses by student gender. These include parental contributions, "expected contributions" from parents, summer and term-time student earnings, grants, loans, and education benefits. The analysis does not include cross-tabulations by gender for responses to expense items. This precludes examination of sex-related differences in educational costs from these data.

The data from these three studies include responses from almost 29,000 undergraduates in 241 colleges and universities. Table 1 displays the number of respondents, by sex, for each of the segments in the three states. While response rates differed among segments, the study reports indicated that the samples were representative of the populations. The Pennsylvania study did not analyze data for a "university" or "four-year public college" segment but by "state-owned" and "state-related" institutional segment types. These responses were combined into a single "four-year public college" segment for the purposes of this paper.

The purpose of this study is to compare responses of men and women at each segment and not responses among segments or states, so the segments are not identified by their states in the subsequent tables. The segments are simply identified as "University A," "4 Year Public B," "2 Year Public C," etc.

Analysis of the Data

The first step in the analysis was to compare the expected and the actual mean parental contributions to men and women at the different segments. If the mean expected contributions are greater for one group at a given segment, then their mean actual contributions should be greater. Also, because financial need is determined on the basis of the equation: "Student Expense Budget minus *Expected* Family Contribution equals Financial Need", students who

⁶ College Entrance Examination Board and Brookdale Associates, *The Needs and Resources of Undergraduate Students in Postsecondary Education in the State of New Jersey, 1974-75*, (Princeton, N. J.: New Jersey Commission on Financing Postsecondary Education, 1975); Brookdale Associates, *California Student Resource Survey, Number 2*, (Sacramento, Ca.: California Student Aid Commission, 1976); and, College Entrance Examination Board and Brookdale Associates, *A Study of the Characteristics and Resources of Students in Postsecondary Education in the Commonwealth of Pennsylvania, Student Resource Survey 2*, (Harrisburg, Pa.: Pennsylvania Higher Education Assistance Agency, 1976).

TABLE 1
Number of Respondents by Sex and Segments

	Men	Women
University of California (9)*	1,628	1,439
Rutgers, The State University (9)	1,264	1,275
California State University and Colleges (19)	1,570	1,156
New Jersey Four-Year Public Colleges (10)	603	833
Pennsylvania Four-Year Public Colleges (18)	2,285	2,400
California Community Colleges (12)	2,678	2,057
New Jersey County Colleges (17)	507	493
Pennsylvania Two-Year Public Colleges (13)	519	445
California Independent Colleges (24)	1,206	1,112
New Jersey Independent Colleges (31)	630	415
Pennsylvania Independent Colleges (79)	2,131	2,012
Total	15,021	13,673

*Numbers in Parentheses indicate the number of campuses or divisions at which students were enrolled.

are expected to receive greater family contributions should receive *less* financial aid. This latter expectation is based on the fact that similar, if not identical, budgets were used for men and women at the institutions in each segment in the study.

The first columns in Table 2 display the mean family incomes of men and women at each of the eleven segments. In only four of the eleven instances were the mean family incomes of men and women significantly different. However, the mean College Scholarship Service expected contributions were significantly different in five instances. The expected contributions are related to family income *and family sizes*, which accounts for the lack of correspondence in family incomes and expected contributions among the segments. For purposes of this discussion, mean expected contributions are important because financial aid is awarded on the basis of expected, rather than actual, values of parental contributions.

Parents of women at University A were expected to make larger mean contributions than men. Parents of men were expected to make significantly larger contributions than parents of women at four segments. At the remaining six segments, the mean expected contributions were not significantly different.

If their parents are expected to contribute about the same mean amounts, then men and women should report about the same mean contribution from their parents. Or, if parents of students of one sex are expected to contribute significantly larger mean amounts, then those students should report significantly larger mean parental contributions. The student-reported contributions are displayed in the third set of columns in Table 2. At six segments the mean expected contributions were not significantly different. However, at four of these segments, women reported significantly greater actual parental contributions. At four other segments, the mean expected contributions to men were greater than those to women. But at only two of these segments were the mean actual parental contributions to men greater than those to women. At just one segment were women expected to receive larger mean parental contributions and there were no differences in the actual mean contributions at that segment.

TABLE 2
Mean Student-Reported Family Incomes, CSS Expected Contributions
and Student-Reported Parental Contributions, by Segments

	Incomes		Expectations		Contributions	
	Men	Women	Men	Women	Men	Women
University A	\$18,279	\$18,427	\$1,035	\$1,199*	\$1,395	\$1,399
University B	16,132	16,628	1,231	1,311	853	1,002*
4 Yr. Public A	\$13,936	\$14,551	\$ 782	\$ 750	\$ 443	\$ 531*
4 Yr. Public B	14,488	15,365*	1,087	1,144	510	646*
4 Yr. Public C	14,602	14,968	900	885	814	992*
2 Yr. Public A	\$13,241	\$12,892	\$ 523*	\$ 439	\$ 354	\$ 364
2 Yr. Public B	14,638*	13,444	1,122	996	445	400
2 Yr. Public C	13,097	12,422	615*	487	327	371
Independent A	\$18,767	\$18,074	\$1,560*	\$1,378	\$1,669*	\$1,501
Independent B	18,468	19,170*	1,643	1,523	1,668	1,606
Independent C	17,700*	17,009	1,365*	1,225	1,523*	1,441

* Indicates differences between pairs of data are statistically significant at the .05 level of significance.

Therefore, six of the eleven instances "favored" the men; that is, the mean actual contributions to them were less than expected in comparison to contributions to women. At just one segment, University A, did the distribution of actual contributions favor the women.

Table 3 compares the mean expected contributions with mean amounts of total aid reported by the students. If the mean expected contributions are greater, mean amounts of total aid would be expected to be less because aid is generally awarded to students whose parents can contribute less toward the costs of their education.

TABLE 3
Mean CSS Expected Contributions and Total Aid, By Segments

	Expectations		Total Aid		Pct. Recipients	
	Men	Women	Men	Women	Men	Women
University A	\$1,035	\$1,199*	\$1,425*	\$1,383	42.0	40.5
University B	1,231	1,311	1,260	1,292	50.0	51.5
4 Yr. Public A	\$ 782	750	\$1,499*	\$1,155	31.8	35.5*
4 Yr. Public B	1,087	1,144	1,210	1,078	46.9	48.1
4 Yr. Public C	900	885	1,325	1,342	62.4	60.8
2 Yr. Public A	\$ 523*	\$ 439	\$1,458*	\$ 930	31.3	37.3*
2 Yr. Public B	1,122	996	1,160	1,045	36.9	43.8*
2 Yr. Public C	615*	487	1,082	1,030	53.0	49.4
Independent A	\$1,560*	\$1,378	\$2,466	\$2,383	70.1	70.1
Independent B	1,643	1,523	2,241*	1,996	58.7	60.1
Independent C	1,365*	1,225	2,044	1,980	64.3	67.2*

* Indicates differences between pairs of data are statistically significant at the .05 level of significance.

At six segments, the mean expected parental contributions of men and women were not significantly different. At two of these segments (4-Year Public A and Independent B), men reported significantly greater mean amounts of financial aid than the women. At 4-Year Public A more women reported receipt of aid from some source, 35.5 percent as compared to 31.8 percent. But

TABLE 4

Mean Total Grants and Loans, and CSS Expected Contributions, By Segments

	Expectations		Total Grants		Pct. Receiving Grants		Total Loans		Pct. Receiving Loans	
	Men	Women	Men	Women	Men	Women	Men	Women	Men	Women
University A	\$1,035	\$1,199*	\$ 943	\$ 947	28.7	31.6*	\$1,005	\$ 903	18.4	18.1
University B	1,231	1,311	749	795	35.8	39.7*	1,043	907	27.0	27.2
4 Yr. Public A	\$ 782	\$ 750	\$1,004	\$ 748	15.7	21.9	\$1,219*	\$ 953	14.5	15.1
4 Yr. Public B	1,087	1,144	541	606	28.6	33.4	1,214	1,051	21.4	20.3
4 Yr. Public C	900	885	846	834	50.1*	45.6	1,094	1,070	27.1	30.8*
2 Yr. Public A	\$ 523*	\$ 439	\$1,061*	\$ 794	14.7	20.4*	\$1,570*	\$ 791	7.2	6.3
2 Yr. Public B	1,122	996	768	788	22.1	28.8*	1,074	1,231	12.8	11.0
2 Yr. Public C	615*	487	679	722	40.7	35.7	941	756	13.3	14.2
Independent A	\$1,560*	\$1,378	\$2,016	\$1,947	58.3	60.4	\$1,128	\$1,029	34.2	33.8
Independent B	1,643	1,523	1,518	1,447	42.4	44.1	1,366	1,219	37.2	36.6
Independent C	1,365*	1,225	1,390*	1,271	51.1	54.5*	1,271	1,229	35.7	39.5*

* Indicates differences between pairs of data are statistically significant at the .05 level of significance.

when the aid is apportioned among all students, the men received greater average amounts of aid, \$477 as compared to \$410. Because more women than men at 2-Year Public B reported receipt of aid, the distribution of aid at that segment favors the women.

Because their mean expected family contributions were greater, men at four segments were expected to receive *less* aid than women. At three of these segments (2-Year Public C, Independent A, and Independent C), the mean amounts of aid received by men and women were not significantly different. At the fourth segment, 2-Year Public A, men received larger mean amounts of aid than the women. Even though proportionately more women at this segment reported receipt of aid, the average aid per student to all men (including non-recipients) was greater, \$456 as compared to \$346.

At University A, men were expected to receive larger mean amounts of aid and they did. However, because there was no significant difference in the percentages of men and women who received aid at this segment, there was no significant difference in the mean amounts of aid received by all men and women, \$598 as compared to \$560. Therefore, the distribution favored the women. So, at eight out of eleven segments the distribution of aid *did not* follow the pattern expected from the mean parental contributions. At six segments (4-Year Public A, 2-Year Public A, 2-Year Public C, and the three Independent College segments), the distribution of aid "favored" the men. The distribution of aid "favored" the women at two segments, 2-Year Public B and University A.

The total amounts of aid reported by students are important, but it is also important to consider what kinds of aid are received by the men and women. Table 4 displays the mean grants and loans reported by students at each of the segments.

Because there were no significant differences in the mean expected parental contributions to men and women at six segments (University B, the three 4-Year Publics, 2-Year Public B, and Independent B), the mean grant awards to men and women, *and* the percentage of students reporting receipt of grants, should have been similar at these segments. At University B and 2-Year Public B, more women than men received grants. At 4-Year Public C more men received grants. There were no significant differences in grant awards at the other three segments.

At four segments (2-Year Public A, 2-Year Public C, and Independents A and C) the mean expected parental contributions of men were greater than those of women. Therefore, it was expected that women at these segments should receive more grant aid to offset their greater need. The women at each of these four segments did not receive proportionately greater amounts of grant aid than the men. Therefore, the distribution of grant aid "favored" the men in that they were expected to receive less aid than they did — relative to the women.

Men at University A should have received larger amounts of grant aid than women because their mean expected parental contributions were less than those of women. The men at this segment were less likely to report receipt of grant aid, although the mean amounts they received were similar to those received by women. So the distribution of grant money "favored" the women at this segment. At eight of the eleven segments, the distribution of grant aid "favored" one sex over another. In five instances, the men received the favorable treatment.

Among the six segments where mean expected parental contributions were similar, the distribution of loan awards "favored" the men at 4-Year Public A in that they received larger mean loan awards. The distribution "favored" the women at 4-Year Public C as significantly more of them received loans. The distribution of loans at the other four segments "favored" neither group.

The distribution of loans at the four segments where mean expected parental contributions to men were larger favored the men in three instances — 2-Year Public A, 2-Year Public C, and Independent A. At Independent C, women were expected to receive greater loan awards because of their smaller expected family contributions. A significantly greater percentage of women received loans, but the mean amounts received by both sexes were not significantly different.

At University A, men were expected to receive more loan awards as their needs were greater. There was no significant difference in the distribution of loans at this segment, thereby "favoring" the women. In seven out of eleven instances, the distribution of loan dollars "favored" one sex over another. In four of these instances the men were "favored".

It is evident, from the data analyzed thus far, that the distribution of total aid, grant aid, and loan aid dollars do not correspond to the average family financial circumstances of men and women. In general, the men are more likely to be "favored" by the distribution of aid dollars. Furthermore, at four out of six segments where mean expected parental contributions were similar, the parents of women made significantly greater actual mean contributions than those of parents of men. There are still more differences in the patterns of resources available to men and to women.

The SRS data for work-study awards were not cross-tabulated by student sex, so the mean awards of this type and the percentage of recipients cannot be analyzed here. Table 5 displays the mean amounts of student summer and term-time earnings reported by men and women. These include work-study earnings

TABLE 5
Mean Summer and Term-Time Earnings
By Segments

	Earnings		Pct. Earnings	
	Men	Women	Men	Women
University A	\$1,869*	\$1,330	87.0*	84.0
University B	1,903*	1,305	94.1*	89.1
4 Yr. Public A	\$2,861*	\$1,772	82.7*	78.6
4 Yr. Public B	2,630*	1,615	92.7*	87.0
4 Yr. Public C	1,432*	849	86.0*	80.0
2 Yr. Public A	\$2,692*	\$1,459	80.2*	77.3
2 Yr. Public B	2,611*	1,661	80.3*	77.3
2 Yr. Public C	2,066*	1,298	83.2*	73.3
Independent A	\$1,701*	\$1,110	90.5*	88.3
Independent B	2,000*	1,128	91.9*	86.5
Independent C	1,552*	1,054	89.8*	86.3

* Indicates differences between pairs of data are statistically significant at the .05 level of significance.

as well as earnings from employment which is not considered financial aid. At each of the eleven segments, men reported higher mean earnings and greater proportions of men reported having summer and term-time earnings.

Students are expected to save some money from earnings to be used for educational costs. Because they earned substantially more, men were expected to save more. This is the case, as Table 6 shows that the mean savings of men are significantly larger than those of women at each segment. However, at just two segments (4-Year Public C and 2-Year Public A), did significantly more men than women report making contributions from savings. When the aggregate savings of all men and women (including those who did not report savings) are compared to the aggregate earnings of all men and women (including those who did not report earnings), women at eight segments reported significantly higher percentages of total earnings were contributed as savings. Therefore, while women are less likely than men to report earnings and while they earn significantly less than men, women generally save greater proportions toward educational costs.

TABLE 6
Mean Contributions From Savings and Aggregate Savings
As A Percent of Aggregate Earnings, By Segments

	Savings		Pct. Saving		Aggregate Savings/Earnings	
	Men	Women	Men	Women	Men	Women
University A	\$733*	\$611	58.5	57.1	26.4	31.2*
University B	750*	605	58.5	58.1	24.6	30.2*
4 Yr. Public A	\$789*	\$623	49.7	48.8	16.6	21.8*
4 Yr. Public B	765*	534	55.1	53.8	17.3	20.4
4 Yr. Public C	717*	502	58.7*	55.0	34.2	40.6*
2 Yr. Public A	\$827*	\$578	43.8	52.6*	16.8	27.0*
2 Yr. Public B	859*	568	49.9	48.5	19.0	21.3
2 Yr. Public C	716*	473	55.3	52.3	23.0	26.2
Independent A	\$692*	\$568	57.1*	52.0	23.3	30.2*
Independent B	823*	635	56.2	55.4	25.2	31.4*
Independent C	768*	563	63.5	62.2	35.0	38.5*

* Indicates differences between pairs of data are statistically significant at the .05 level of significance.

Another source of resources which can be used to defray educational costs is educational benefits. These include Social Security and Veterans benefits, state vocational rehabilitation benefits, and welfare payments. Men, primarily because they are more apt to have been veterans are more likely than women to report receipt of educational benefits. Table 7 displays the mean education benefits reported by students at the eleven segments. At each segment men reported larger mean amounts and, at all but Independents B and C, men were more likely to report receipt of education benefits.

Table 8 displays the mean total resources of all men and women by segments. The figures were derived from the previous tables. Mean amounts were calculated for all students, not just aid recipients. The calculations were performed as follows: for example, at University A, 28.7 percent of the men reported receiving grants in the mean amount of \$943. Therefore, the mean for all students is \$271 ($28.7 \times \$943 = \$27,064 \div 100.0 = \271). The mean amount of work-study

awards for all students was obtained by subtracting mean grants and mean loans from mean total financial aid.

Because a major purpose of this paper is to focus attention on differences in family contributions and financial aid for men and women, summer and term-time earnings *exclusive* of work-study awards are not displayed as a part of "total resources". These are represented as "Other Earnings" in the table.

TABLE 7
Mean Education Benefits, By Segments

	Benefits		Pct. Receiving	
	Men	Women	Men	Women
University A	\$1,874*	\$1,338	13.3*	9.7
University B	1,545*	1,018	14.6*	10.4
4 Yr. Public A	\$2,139*	\$1,367	35.7*	14.7
4 Yr. Public B	1,957*	1,189	20.7*	11.5
4 Yr. Public C	1,629*	1,118	18.8*	13.1
2 Yr. Public A	\$1,914*	\$1,328	42.0*	21.4
2 Yr. Public B	2,050*	1,086	32.3*	16.4
2 Yr. Public C	1,925*	1,477	37.0*	18.4
Independent A	\$1,551*	\$1,048	13.9*	9.4
Independent B	1,752*	1,192	14.6	12.9
Independent C	1,740*	1,231	12.5	11.0

* Indicates differences between pairs of data are statistically significant at the .05 level of significance.

There are some significant differences in the patterns of resources available to men and women. Men at all segments had access to substantially greater resources than women. When "other earnings" are added to resources from the family and financial aid, the differences are even greater. At all the public segments significantly greater percentages of the women's total resources came from their parents. Also at these eight segments men received greater percentages of their total resources from education benefits. The patterns of resources of men and women at the Independent College segments were quite similar, possibly because of greater homogeneity of student characteristics at these segments. However, men at these segments, as at the public segments, had access to greater dollar amounts of resources than women.

Significantly greater percentages of the men's total resources at six segments came from savings. At one segment, 2-Year Public A, significantly greater percentage of the women's total resources came from savings. There were no significant differences in the percentages of savings resources at four segments (University A, 4-Year Public A, 2-Year Public B, and 2-Year Public C).

At eight segments (all but 4-Year Public C and Independents B and C), significantly greater percentages of the women's resources came from grants. However, women received significantly greater dollar amounts than men at just three of the segments (University B, 4-Year Public B, and 2-Year Public B).

Loans represent similar percentages of total resources of men and women at seven segments. At three segments (4-Year Public C, 2-Year Public B, and Independent C), the women received a greater percentage of their total resources. Men at 2-Year Public A received a greater percentage of their total resources in loans. Work-study awards represented similar percentages of total resources of

TABLE 8
Mean Total Resources By Segments

	University A				University B			
	Men		Women		Men		Women	
	Amt.	Pct.	Amt.	Pct.	Amt.	Pct.	Amt.	Pct.
Parents' Contribution	\$1,395	52.2	\$1,399	57.4	\$ 853	39.7	\$1,002	49.2
Education Benefits	249	9.3	131	5.4	441	20.5	266	13.0
Savings	428	16.0	349	14.3	226	10.5	106	5.2
Grants	271	10.1	299	12.2	268	12.5	316	15.5
Loans	185	6.9	163	6.7	282	13.1	266	13.0
Work-Study	143	5.5	98	4.0	80	3.7	83	4.1
Total	\$2,671	100.0	\$2,439	100.0	\$2,150	100.0	\$2,039	100.0
Other Earnings	\$1,483		\$1,019		\$1,631		\$ 997	

	4 Yr. Public A				4 Yr. Public B				4 Yr. Public C			
	Men		Women		Men		Women		Men		Women	
	Amt.	Pct.	Amt.	Pct.	Amt.	Pct.	Amt.	Pct.	Amt.	Pct.	Amt.	Pct.
Parents' Contribution	\$ 443	21.3	\$ 531	36.7	\$ 510	26.8	\$ 646	40.7	\$ 814	34.4	\$ 992	44.5
Education Benefits	764	36.8	201	13.9	422	22.2	287	18.1	421	17.8	276	12.4
Savings	392	18.9	304	21.0	405	21.3	137	8.6	306	12.9	146	6.5
Grants	158	7.6	164	11.3	155	8.1	202	12.7	424	17.9	380	17.0
Loans	177	8.5	144	10.0	260	13.7	213	13.4	296	12.5	330	14.8
Work-Study	142	6.9	102	7.1	152	7.9	104	6.5	107	4.5	106	4.8
Total	\$2,076	100.0	\$1,446	100.0	\$1,904	100.0	\$1,589	100.0	\$2,368	100.0	\$2,230	100.0
Other Earnings	\$2,224		\$1,291		\$2,134		\$1,197		\$1,018		\$ 467	

	2 Yr. Public A				2 Yr. Public B				2 Yr. Public C			
	Men		Women		Men		Women		Men		Women	
	Amt.	Pct.	Amt.	Pct.	Amt.	Pct.	Amt.	Pct.	Amt.	Pct.	Amt.	Pct.
Parents' Contribution	\$ 354	17.9	\$ 364	28.0	\$ 445	25.4	\$ 400	34.1	\$ 327	16.3	\$ 371	26.5
Education Benefits	803	40.7	284	21.9	662	37.8	178	15.2	712	35.5	272	19.5
Savings	362	18.3	304	23.4	217	12.4	136	11.6	396	19.7	247	17.7
Grants	156	7.9	162	12.5	170	9.7	227	19.4	276	13.7	258	18.4
Loans	113	5.7	50	3.8	137	7.8	135	11.5	125	6.2	107	7.6
Work-Study	187	9.5	135	10.4	121	6.9	96	8.2	172	8.6	144	10.3
Total	\$1,975	100.0	\$1,299	100.0	\$1,752	100.0	\$1,172	100.0	\$2,008	100.0	\$1,399	100.0
Other Earnings	\$1,972		\$ 993		\$1,976		\$1,188		\$1,547		\$ 807	

	Independent A				Independent B				Independent C			
	Men		Women		Men		Women		Men		Women	
	Amt.	Pct.	Amt.	Pct.	Amt.	Pct.	Amt.	Pct.	Amt.	Pct.	Amt.	Pct.
Parents' Contribution	\$1,669	41.6	\$1,501	42.1	\$1,668	45.1	\$1,606	48.5	\$2,241	52.5	\$1,996	52.4
Education Benefits	395	9.9	295	8.3	256	6.9	154	4.3	218	5.1	135	3.5
Savings	216	5.4	99	2.8	463	12.5	351	10.6	488	11.5	350	9.2
Grants	1,176	29.3	1,176	33.0	644	17.4	638	19.3	710	16.7	692	18.2
Loans	386	9.6	348	9.7	507	13.7	446	13.5	454	10.7	485	12.7
Work-Study	167	4.2	146	4.1	164	4.4	116	3.5	150	3.5	154	4.0
Total	\$4,009	100.0	\$3,565	100.0	\$3,702	100.0	\$3,311	100.0	\$4,261	100.0	\$3,812	100.0
Other Earnings	\$1,372		\$ 834		\$1,674		\$1,007		\$1,244		\$ 756	

men and women at all but one segment, University A. At that segment, men received significantly greater dollar amounts of work-study awards and these dollars represented a greater percentage of their total resources.

Another, and final, way of looking at the differences in total resources available to men and women is to compare the percentages available from parental and student contributions and self-help and those from "free money" sources. "Free money" sources include grants and education benefits because they need not be paid back from current or future labor by students or their parents. At three segments (4-Year Public B and Independents B and C), the percentages of "free money" resources available to men and women were similar. Women at Independent A received significantly greater percentages of their resources in the form of "free money." At the other seven segments, significantly greater percentages of the men's resources were in the form of "free money."

At six of these seven segments (all but University A), the mean expected parental contributions to men were equal to or greater than those expected to women (See Table 2). At Independent A, mean expected contributions from parents of women were greater than those expected from parents of men. There were no significant differences in the mean expected parental contributions to men and women at the other segments. Therefore, at six of the eleven segments, men received significantly greater percentages of their total resources in the form of "free money" even though their parents were expected to contribute as much or more than parents of women. Thus it appears that women and their parents, more frequently than not, have to defray greater percentages of educational costs from their current or future earnings than do the men and their parents.

Discussion

The analysis indicates that there are significant sex-related differences in total resources available to pay college costs, in the amounts and percentages derived from different sources, and in the way financial aid is distributed among students.

Parents of women at six segments (all public colleges) contributed more than expected in relation to amounts contributed by parents of men. At each of these segments parental contributions to women represented significantly greater percentages of their total resources than did the contributions to men.

Perhaps parents are, for various reasons, more willing to contribute to a daughter's than a son's educational costs. Parents may believe a daughter's education benefits them in enhancing the daughter's potential for marriage to a better educated man. Parents may contribute less to a son's education because they believe he will receive greater direct economic benefits from his education. Parents may contribute more to daughters because they are less likely than sons to be able to earn resources on their own. That is, they may contribute more because they have to. It does not appear that parents of women contribute more because of a greater ability to make contributions.

The distribution of financial aid appears to favor men more frequently than women. This does not conclusively indicate that aid programs discriminate

against women. Perhaps the student expense budgets of one group or another are higher because they are more likely to live in more expensive off-campus or on-campus residences rather than with parents. Because the exact expense budgets used to award aid to the various students was unknown, it was impossible to determine whether aid programs discriminated against men or women. It was indicated, however, that the distributions appear to favor one group of students over another when they were not expected to do so on the basis of expected parental contributions.

The distribution of aid may favor one sex or another because of different rates of application for aid. If this is the case, more should be learned about why these different rates of application exist.

Major and significant differences exist in the ways in which men and women pay for college. It is important that policymakers know more about the full and true extent of these differences and the factors contributing to them. If educational policymakers intend to enhance all students' access to, choice of, and retention in postsecondary education through pricing and financial aid policies, then further attention must be given to these sex-related differences. When further research is available on the nature, extent, and causes of sex-related differences, then more equitable policies can be adopted and implemented.

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